

DRAGONFLY (ODONATA) RECORDS FROM CENTRAL AUSTRALIA

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Abstract

Sixteen species are listed from the Northern Territory, south of latitude 21° south. Seven of these, *Austroagrion cyane*, *Ischnura heterosticta*, *Austrolestes annulosus*, *Austrogynacantha heterogena*, *Orthetrum migratum*, *Trapezostigma loewi* and *T. stenoloba*, have not been previously recorded specifically from central Australia.

Introduction

The only previously published account of the dragonfly fauna from central Australia is that by Tillyard (1908) who listed 10 species from the Tennant Creek region, approximately 500 km north of Alice Springs. Watson (1974; 1977) lists 18 species as occurring in an area defined as "inland Australia", a region covering approximately one third of the continent, including the southern portion of the Northern Territory.

A series of exceptionally high rainfall years in central Australia from late 1973 to 1977 has given ample opportunity for dragonflies to breed in the region and the opportunity has been taken to survey the dragonfly fauna. Sixteen species are recorded here from the Northern Territory, south of latitude 21° south. Seven of these, *Austroagrion cyane* (Selys), *Ischnura heterosticta* (Burmeister), *Austrolestes annulosus* (Selys), *Austrogynacantha heterogena* (Tillyard), *Orthetrum migratum* Lieftinck, *Trapezostigma loewi* (Brauer) and *T. stenoloba* Watson have not been previously recorded from this region of central Australia although all are known to inhabit inland Australia (cf. Watson 1974; 1977).

The provision of a network of water tanks and dams for pastoral enterprises, mainly over the past 30 years, could also have assisted several species to expand their distributions into formerly lesser watered areas, especially those which breed in still shallow waters. However, the paucity of collectors in central Australia probably accounts for the sparcity of records of most wide-ranging species that periodically inhabit inland Australia.

Records of Odonata taken from 1973 to 1977 by the author are summarised below. These are supplemented by a record of *Orthetrum migratum* held in the Australian National Insect Collection (C.S.I.R.O., Canberra, A.C.T.) to provide a complete checklist. Representative specimens of all species taken by the author have been lodged with the A.N.I.C. while the remaining material is maintained by the author.

In the list following a species is considered "rare" if only one or two individuals have been collected over the entire area; "uncommon" indicates between three and five records and "common" more than five records.

The water types from which dragonflies were collected by the author vary from temporary pools including claypans following heavy rains and isolated creek pools; still, sheltered permanent waters comprising permanent waterholes

in gorges or on major waterways (e.g. Finke River), dams or tanks with grassy margins and Alice Springs sewage works; and open permanent waters such as dams or tanks with little or no vegetation on the edges. Collection locations were evenly scattered throughout the region, from Ayers Rock and Andado (Simpson Desert) in the south, to Chilla Well (Tanami Desert) and Ooratiptra in the north. Areas not visited were the Lake Mackay Aboriginal Reserve west of Alice Springs and the far south-eastern part of the Northern Territory.

List of species

COENAGRIONIDAE

Austroagrion cyane (Selys). Rare, apparently restricted to sheltered permanent waterholes in the George Gill Ranges. Collected in November 1975 and December 1976. Watson (1969) recorded specimens closely allied to *A. cyane* from the Amadeus Basin, N.T. These are in fact *A. cyane* (Watson, pers. comm.).

Ischnura aurora aurora (Brauer). Common, October to May but present throughout year; widespread on all water types but prefers still, temporary or permanent pools.

Ischnura heterosticta (Burmeister). Uncommon, collected in February, May and September; restricted to still, sheltered permanent waters.

Xanthagrion erythroneurum Selys. Common, September to May, but in reduced numbers in other months; widespread on all water types especially still pools with grassy banks.

LESTIDAE

Austrolestes annulosus (Selys). Uncommon, August to May, depending on rains to create temporary pools in sheltered areas; also in still permanent waters; widespread.

Austrolestes aridus (Tillyard). Uncommon, collected in November, December, May, March and June; probably seasonally widespread on temporary and permanent, still, sheltered waters.

AESHNIDAE

Hemianax papuensis (Burmeister). Common, December to May, but in reduced numbers throughout the year; widespread on all water types, especially temporary pools but preferring permanent, open water for breeding.

Austrogynacantha heterogena (Tillyard). Rare; 1 ♀ taken, Reedy Rockhole, George Gill Ranges, N.T. 21 November 1975.

CORDULIIDAE

Hemicordulia tau Selys. Common, November to May, but present in reduced numbers in all other months; widespread on all water types.

LIBELLULIDAE

Diplacodes bipunctata (Brauer). Common, August to April, present in reduced numbers in other months; widespread on all water types, especially temporary pools.

- Diplacodes haematodes* (Burmeister). Common, September to May but rarer in the late summer months, individuals present in winter months; widespread on all water types.
- Orthetrum caledonicum* (Brauer). Common, September to May but present in reduced numbers in all other months; widespread on all water types.
- Orthetrum migratum* Lieftinck. In central Australia this species is known only from Standley Chasm, 42 km W of Alice Springs, where it appears to now be well established. In the A.N.I.C. there are 3 ♂, 2 ♀, taken on 9 February 1966 by E. B. Britton, M. S. Upton and R. S. McInnes (J. A. L. Watson, pers. comm.). On 15 April 1979 I collected a further 2 ♂ and several others were seen.
- Pantala flavescens* (Fabricius). Periodically common, migratory, September to May, widespread on all water types.
- Trapezostigma loewi* (Brauer). Rare, two records only: 1 ♂, 16 Mile Dam, 30 km N of Alice Springs, N.T., 19 September 1977; 1 ♂, Witchetty Bore, Napperby Station, N.T., 7 January, 1977.
- Trapezostigma stenoloba* Watson. Moderately common, September to May; widespread on all water types.

Acknowledgements

I am grateful to Dr J. A. L. Watson and Mr T. A. Weir of C.S.I.R.O., Division of Entomology, Canberra, A.C.T. for identification of specimens and helpful comments.

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A MIGRATION OF THE CAPER WHITE BUTTERFLY *ANAPHAEIS JAVA TEUTONIA* (FABRICIUS) (LEPIDOPTERA: PIERIDAE)

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Most reports of migrations of the Caper White butterfly, *Anaphaeis java teutonia* (Fabricius), in eastern Australia during November record the species moving in a northerly direction. The record below is therefore of interest.

On the 12th November, 1977, many of these butterflies were seen moving south-west across the Hume Highway from 11 km north of Wangaratta, Victoria, to 29 km south of Yass, N.S.W., a distance of 322 km. The butterflies were observed from 13.00 - 17.00 hrs (Eastern Standard Time) and in the middle part of the day they were crossing the road at the rate of one per minute.